

# Nurion™



## Reverse Osmosis Systems for Ingredient Water

**NURION™ reverse osmosis systems produce high purity ingredient water for the Food & Beverage Industry. Plug & play unit suitable for transportation into a container. FAT tested unit. Ready for CIP operation (CIP valves included).**



### ✓ FEATURES & BENEFITS

- Low energy membranes result in lower operating pressures frequency controlled variable speed pump
- Permeate line design and equipment following EHEDG hygienic design principles 1 µm pre-filtration
- Programmable user interface; simple operation, monitoring and data storage
- Treated water diverted at start- up; ensures water quality
- All piping, fittings and valves on feed, reject and permeate line in stainless steel
- All non- metallic materials (pressure vessels, membranes, sealings/ gaskets) are in accordance to at least one drinking water or FDA/NSF/ACS regulations
- 12" touchscreen panel with TFT widescreen colour display
- PLC with Ethernet connection (Siemens)
- HUBGRADE™ ready

### HYDREX® CHEMICALS

Hydrex® 4000 water treatment chemicals from Veolia Water Technologies should be used for optimized plant operation.

### 💧 APPLICATIONS

Ingredient water for food production

### + OPTIONS

- PLC + HMI Allen Bradley
- Inlet pH and ORP measurements
- Control cabinet in SS
- Frame in SS
- Concentrate recirculation line
- Witnessed FAT (with wet tests)

### ASSOCIATED SERVICES

Local after-sales service and support teams offer preventative and corrective maintenance programs to ensure the long-term, efficient operation of installed plant.

Subscription to HUBGRADE™ digital services (asset monitoring, benchmarking, improvement and management, digital training)





### System Operating Parameters

Model	Unit	110x2	110x3	110x4	210x4	211x4	211x5
Inlet Salinity TDS (NaCl)	mg/l	Up to 1000					
Typical Design Flux	l/h/m <sup>2</sup>	30.70	30.70	30.70	30.70	30.70	30.70
Permeate Nominal Flowrate	m <sup>3</sup> /h	5.00	7.50	10.00	15.00	20.00	25.00
Nominal Feed Flowrate	m <sup>3</sup> /h	6.30	9.40	12.50	18.80	25.00	31.30
Recovery	%	80	80	80	80	80	80
Installed Power	kW	8	11	15	15	22	37

### System Dimensions

Model	Unit	110x2	110x3	110x4	210x4	211x4	211x5
Total Installed Length	m	4.00	4.10	4.85	4.85	4.85	5.90
Total Installed Width	m	0.86	0.86	0.86	0.90	0.90	0.90
Total Installed Height	m	1.65	1.65	1.75	1.75	1.92	1.97
Empty Weight	kg	990	1120	1240	1375	1625	2195
Operating Weight	kg	1355	1555	1740	2070	2440	3205

### Pipes Connections

Model	Unit	110x2	110x3	110x4	210x4	211x4	211x5
Feed	DN	50	50	50	50	65	65
Permeate	DN	40	40	40	50	50	65
Permeate diversion	DN	40	40	40	50	50	50
Concentrate	DN	40	40	40	40	40	40
CIP Inlet	DN	50	50	50	50	50	50
CIP concentrate outlet	DN	40	40	40	50	50	50
CIP permeate outlet	DN	40	40	40	50	50	50

### Materials of Construction

Skid	Epoxy coated carbon steel (SS as modified)
Control Cabinet	Epoxy coated carbon steel (SS as modified)
Low pressure Pipework	SS 316
Hlgh pressure Pipework	SS 316

### Feed water Requirements

Parameter	Unit	Value
Minimum water temperature	°C	5
Maximum water temperature	°C	30
Minimum supply pressure	barg	3
Maximum supply pressure	barg	6
Max Silt Density Index (SDI)	-	3
Maximum Inlet Turbidity	NTU	1
Max inlet Manganese Mn <sup>2+</sup>	mg/l	< 0.05
Max inlet Aluminium Al <sup>3+</sup>	mg/l	< 0.05

### Environmental Conditions

Parameter	Unit	Value
Minimum ambient temperature	°C	5
Maximum ambient temperature	°C	40
Maximum humidity	%	90

### Typical Treated Water Quality

Parameter	Unit	Value
Typical Salt Rejection	%	96 - 98
Compressed Air Pressure	barg	6 (max)
Permeate Pressure	barg	Inlet pressure

### Power Requirements

Parameter	Unit	Value
Voltage	V	380 / 420
Frequency	Hz	50 / 60
Phases	-	3